

Remarks/Arguments

Claims 1-11 remain pending in the application. Claims 1, 7, and 10 are independent claims. Claims 3 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Rejection of claims 1 and 4 under 35 U.S.C. 102(e) as being anticipated by Byers et al. (US Pat 6,693,901), hereinafter referred to as Byers.

Applicants submit that for at least the following reasons, claims 1 and 4 are not anticipated by Byers.

In order for a reference to anticipate a claim, MPEP 2131 requires the reference to teach every element of the claim. It is respectfully submitted that Byers does not teach every element of the Applicants' claim 1, and therefore does not support a prima facie case of anticipation.

For example, claim 1 requires, in part:

"a first routing engine having input and output sides." (Emphasis added)

In the Office Action, page 3, it is alleged by the Office that Byers discloses a first routing engine having input and output sides (control routing circuit 112 for circuit board 104a, figure 1). Applicants respectfully disagree with this allegation.

Figure 1 of Byers shows that circuit board 104a includes the control routing circuit 112 which is linked to hub 110. Figure 1 of Byers also shows that point-to-point connections are formed between circuit boards 104a, 104b, and 104c. Byers, at Col. 3, lines 4-15, describes that the point-to-point connections are InfiniBand 2.5 gigabits per second bi-directional serial links. Byers makes clear that a substitute would be a point-to-point technology.

However, Byers does not disclose the routing engine having input and output sides, as required by claim 1. Byers relies on point-to-point bi-directional serial links, either InfiniBand or other point-to-point bi-directional technology. Byers does not

consider or suggest a routing engine having input and output sides. Since Byers only suggests support for bi-directional traffic, none of the connections can be termed an input or output side.

In contrast to the Applicants' claimed invention, Byers shows that the point-to-point connections between router components are bi-directional links, hence there is no separate input and output sides.

Furthermore, even considering the bi-directional connections as being input and output, for argument sake, Byers still does not meet the claimed invention since with the bi-directional links a single stream of data would connect the "output" of one router to an "input" of another router which fails to meet the claimed features of: a first link, said first link coupling said input side of said first routing engine to said input side of said second routing engine. An interconnection between input sides of routing engines implies that the same input data are available for input at a plurality of routing engines (first, second, and third of claim 1). This is clearly not suggested in Byers. Byers would certainly be sending the data from an output to an input as shown in Fig. 1 of Byers.

Therefore, Byers never connects two input sides. Accordingly, Claim 1 requires at least input and output sides and a first link coupling said input side of said first routing engine to said input side of said second routing engine, however, the bi-directional links of Byers cannot meet both limitations of claim 1 and does not disclose or even suggest an input side and an output side and the first link, as recited in claim 1.

Thus, the interconnection between the control routing circuits 112 as disclosed in Byers does not teach or even suggest "a first routing engine having input and output sides," as recited in claim 1. Therefore, Byers does not anticipate Applicants' claim 1.

Furthermore, claim 1 recites:

- a second routing engine having input and output sides;
- a third routing engine having input and output sides;

Similar to the first routing engine, Byers fails to teach the second and third routing engines having input and output sides, as required by claim 1.

Because Byers does not disclose all limitations in the claim, the Applicants respectfully submit that Byers does not support a prima facie case of anticipation and as such, the rejection to independent claim 1 under 35 U.S.C. 102(e) is unfounded as per MPEP 2131 and should be withdrawn.

Dependent claim 4 depends from and incorporates by reference all the features of allowable claim 1. Furthermore, dependent claim 4 includes additional distinguishing features. For dependent claim 4, Applicants essentially repeat the above arguments from claim 1 and apply them to dependent claim 4. Thus, Applicants respectfully submit that dependent claim 4 is allowable at least by virtue of its dependency on allowable parent claim 1 and respectfully request the withdrawal of the rejection to claim 4.

Rejection of claims 7, 10 and 11 under 35 U.S.C. 102(b) as being anticipated by Civanlar et al. (US Pat 6,078,963), hereinafter referred to as Civanlar.

Applicants submit that for at least the following reasons, claims 7, 10, and 11 are not anticipated by Civanlar.

In order for a reference to anticipate a claim, MPEP 2131 requires the reference to teach every element of the claim. It is respectfully submitted that Civanlar does not teach every element of Applicants' claim 7, and therefore does not support a prima facie case of anticipation.

For example, claim 7 requires, in part: *"means for coupling said at least three broadcast router components wherein said input side of each of said broadcast router component is connected, by a discrete link, to each and every one of the other said input sides of said broadcast router components."* (Emphasis added).

In the Office Action, page 4, the examiner alleges that Civanlar discloses the feature of said input side of each of said linear expandable broadcast router component is connected, by a discrete link, to each and every one of the other said input sides of said broadcast router components (Figure 1 showing the links in the switching fabric 102 fully interconnecting the intelligent routing ports 103 allegedly are discrete). Applicants respectfully disagree with this allegation.

Civanlar, in Figure 1, apparently shows a plurality of intelligent router ports 103 interconnected by a switching fabric 102. Civanlar at Column 3, lines 8-16 explains that the switching fabric may simply be a bus interconnecting all of the line cards, or may include one or more multiplexors and/or demultiplexers, or may be a reconfigurable partial and/or full mesh of direct or indirect connections between various intelligent router ports and/or a network of switches. However, a switching fabric does not constitute discrete link. Nowhere does Civanlar disclose or even suggest that the input sides of the router components are “connected, by a discrete link, to each and every one of the other said input sides of said broadcast router components” as recited in claim 7.

As pointed out above, Civanlar’s interconnection of the router ports by a switching fabric does not constitute the same thing as a connection by a discrete link. The switching fabric, defined by Civanlar as a bus, multiplexors, demultiplexers, and a mesh of direct and indirect connections, does not comprise a discrete link. A multiplexor is commonly known as a device for combining signals, which is not a discrete link. A demultiplexer comprises a device which decodes a single line signal into multiple signals, which is not a discrete link. A mesh of direct and indirect connections is clearly not a discrete link. Nowhere does Civanlar disclose or even suggest that a switching fabric could comprise a discrete link. As such, Civanlar does not disclose or even suggest “means for coupling said at least three broadcast router components wherein said input side of each of said broadcast router component is connected, by a discrete link, to each and every one of the other said input sides of said broadcast router components,” as recited in claim 7. Accordingly, Civanlar does not anticipate Applicants’ claim 7.

Also, Civanlar does not teach or suggest that these connections are among the input sides of the router components. Civanlar, in Figure 2, shows a network interface 110 connecting to a network node, and a link to switching fabric (bottom right link). This network interface serves to send and receive data. This clearly suggests that the input and output of the router is through the network interface 110, and that the interconnection formed by the switching fabric 102 is not among input sides of the routers. In addition, Civanlar does not teach or suggest that these network interfaces 110 are “connected, by a discrete link, to each and every one of the other said input sides of said broadcast router components.” Therefore, for these additional reasons, Applicant’s claim 7 is not anticipated by Civanlar.

In view of at least the foregoing, claim 7 is not anticipated by Civanlar.

Similarly, independent claim 10 requires, in part:

“coupling, using a first discrete link, said input side of said first router to said input side of said second router;

coupling, using a second discrete link, said input side of said first router to said input side of said third router; and

coupling, using a third discrete link, said input side of said second router to said input side of said third router.”

In claim 10, the input sides of the three routers are fully coupled by three discrete links. Similar to the arguments discussed above for claim 7, Civanlar fails to disclose that the input sides of the routers are fully coupled by discrete links, and thus fail to disclose at least the above mentioned features of claim 10. Therefore, Civanlar does not anticipate claim 10.

Claim 11 depends from claim 10 and thus incorporates by reference the features of claim 10. Therefore, claim 11 is not anticipated by Civanlar for the same reasons as claim 10. Accordingly, Applicants request withdrawal of the rejection to claims 7, 10, and 11 under 35 U.S.C. 103(a).

Rejection of claims 2 and 5 under 35 U.S.C. 103(a) as unpatentable over Byers, as applied to claim 1 above, and further in view of Choe (US Pub 2002/0118682), hereinafter Choe.

Claims 2 and 5 ultimately depend from claim 1 and thus incorporate by reference the features of claim 1. Therefore, claims 2 and 5 patently distinguish over the combination Byers and Choe for the same reasons as claim 1. Applicants request withdrawal of the rejection to claims 2 and 5 under 35 U.S.C. 103(a).

Rejection of claims 8 and 9 under 35 U.S.C. 103(a) as unpatentable over Civanlar, as applied to claim 7 above, and further in view of Lydon et al. (US Pat 6,680,939), hereinafter Lydon.

Claims 8 and 9 ultimately depend from claim 7 and thus incorporate by reference the features of claim 7. Therefore, claims 8 and 9 patently distinguish over the combination Civanlar and Lydon for the same reasons as claim 7. Applicants request withdrawal of the rejection to claims 8 and 9 under 35 U.S.C. 103(a).

Conclusion

In view of the foregoing, applicants solicit entry of this amendment and allowance of the claims. If the Examiner cannot take such action, the Examiner should contact the applicant's attorney at (609) 734-6820 to arrange a mutually convenient date and time for a telephonic interview.

Respectfully submitted,
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